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EXAMINER

STEVENS, ROBERT

ART UNIT

PAPER NUMBER

2162

DATE MAILED: 09/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/795,964

Applicant(s)

CHRISTOPHERSEN ET AL.

Examiner

Robert Stevens

Art Unit

2162

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 28 July 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 July 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>20040728</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Specification*

1. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

**The Abstract begins with the claim terminology "The invention *comprises* ...". The Office recommends removal of those three words, since they are unnecessary and legal phraseology.**

2. The disclosure is objected to because of the following informalities: The specification on page 4 line 21 contains the misspelled word "fro". Applicant is asked to review the disclosure and correct any misspellings, grammatical errors, etc., throughout the disclosure (including specification, drawings and claims).

Appropriate correction is required.

***Claim Objections***

3. **Claim 16 is objected to because of the following informalities:** In line 4, between the words “digital” and “in”, the word “image” appears to be missing. Appropriate correction is required.

***Claim Rejections - 35 USC § 101***

4. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5. **Claims 1-11 and 16-29 are rejected under 35 U.S.C. 101** because the claimed invention is directed to non-statutory subject matter.

To be statutory, a claimed computer-related process must either: (A) result in a physical transformation outside the computer for which a practical application is either disclosed in the specification or would have been known to a skilled artisan, or (B) be limited to a practical application with useful, concrete and tangible result.

**Regarding independent claims 1, 9 and 16:** These claims essentially recite the acquiring and storage of image data. Although there made be some transformation and storage of such data, which may be evidence of tangibility, there is no use of that

data, such as presentment to a user. It is noted that claim 9, for instance, recites "for customer retrieval", but that claim does not require, i.e., does not positively recite, customer retrieval of stored image data. As such, these claims are non-statutory under 35 USC 101, because the invention recited therein does not produce a useful, concrete and tangible result.

**Claims 1, 9 and 16, and other claims that depend on them,** are not patent eligible because the invention recited therein does not produce a useful, concrete and tangible result.

***Claim Rejections - 35 USC § 112***

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. **Claims 1-29 are rejected under 35 U.S.C. 112, second paragraph,** as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

**Regarding independent claim 1:** This claim recites receiving image files, then storing them based upon file size. However, there is no recited ranking step (or file size determination step). As such, an essential element is missing, and thus the claim's

scope is vague and indefinite. Additionally, this claim recites the terms “smallest”, “fastest”, “largest”, and “slowest” in lines 6-7. However, there are no criteria for determining what would be considered “smallest”, “fastest”, “largest”, and “slowest”. Additionally, the language of lines 3-4 (“images of different image files sizes”) is awkward. Thus the claim’s scope is vague and indefinite.

**Regarding claim 2:** This claim recites the term “logical” in line 2. However, there are no criteria for determining what would be “logical”. Additional, claim 2 recites “said data storage media”, while parent claim 1 recites a “plurality of different data storage media”. It is therefore unclear as to which data storage media is being referenced in claim 2. As such, the claim’s scope is vague and indefinite.

**Regarding claim 6:** This claim recites the terms “limited” and “sufficient” in lines 2-3. However, there are no criteria for determining what would be considered “limited” and “sufficient”. As such, the claim’s scope is vague and indefinite.

**Regarding independent claim 9:** This claim recites the terms “smaller”, “fastest”, “larger”, “slowest” and “highest” in lines 7-9 and 11-12. However, there are no criteria for determining what would be considered “smaller”, “fastest”, “larger”, “slowest” and “highest”. As such, the claim’s scope is vague and indefinite. Additionally, there is a lack of antecedent basis for “the highest resolution digital image” recited in line 11.

**Regarding claim 10:** This claim appears to be claiming a system including a computer-readable medium for storing instructions to implement a method. Additionally, the claim recites a “film or print scanner”, making it unclear which device type is being claimed. As such, it is unclear what statutory subject matter is being claimed, and thus, the claim’s scope is vague and indefinite.

**Regarding claim 11:** This claim recites the terms “low” (i.e., low usage and low resolution) and “high” in lines 2-4. However, there are no criteria for determining what would be considered “low” and “high”. As such, the claim’s scope is vague and indefinite.

**Regarding independent claim 12:** This claim recites the terms “smallest” (i.e., “smallest ... sizes”), “fastest”, “largest” (i.e., largest ... sizes”), “slowest” and “faster” in lines 6-7 and 9. However, there are no criteria for determining what would be considered “smallest”, “fastest”, “largest”, “slowest” and “faster”. As such, the claim’s scope is vague and indefinite.

**Regarding claim 15:** This claim recites the terms “low” and “high” in lines 2-5. However, there are no criteria for determining what would be considered “low” and “high”. Additionally, the term “remaining” is unclear. Are these remaining files those high resolution files that did not have an associated low-res file discarded? The Office will interpret the claim, and any substantially similar claim, as thus. Additionally, it is

unclear how one retrieval request results in recreation of images corresponding to all remaining high res files, when presumably only one file is desired by the requesting user. As such, the claim's scope is vague and indefinite.

**Regarding independent claim 16:** This claim recites structural elements, but there is no linkage between a "data structure" element and the "network interface" and "image router" elements. Additionally, there is no "selection" element recited, and therefore an essential element appear to be missing from the claims. Additionally, there is a lack of antecedent basis for the "selected ones" recited in line 10. As such, the claim's scope is vague and indefinite.

**Regarding claims 17 and 19:** Each of these claims recites the terms "fast" and "slow" in lines 2-3 and 9. However, there are no criteria for determining what would be considered "smallest", "fastest", "largest", "slowest" and "faster". As such, the scope of each of these claims is vague and indefinite. **Dependent claims 18 and 20** are likewise rejected.

**Regarding claims 18 and 20:** These claims are each directed to a data structure comprising a storage drive. It is unclear how a software artifact (i.e., a data structure) can be comprised of a hardware artifact (i.e., a storage drive). As such, the scope of each of these claims is vague and indefinite.



**Claims 2-8, 10-11, 13-15 and 17-29** are dependent upon claims 1, 9, 12 and 16, respectively, and are therefore likewise rejected.

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. **Claims 1-6, 8-10, 12-14, 16-26 and 29 are rejected under 35 U.S.C. 103(a)** as being unpatentable over Virginia E. Ogle et al. ("Chabot: Retrieval From a Relational Database of Images", IEEE Computer, Vol. 28, No. 9, Sep. 1995, pp. 40-48, hereafter referred to as "Ogle") in view of Yokomizo et al. (US Patent No. 6,522,418, filed May 12, 1998 and issued Feb. 18, 2003, hereafter referred to as "Yokomizo").

**Regarding independent claim 1:** Ogle discloses acquiring images and storing those images on media of differing access speeds, depending upon image size. (See Ogle page 43, noting the section entitled "Storage", which discusses receiving images

of varying resolutions, and storing lower resolution images, such as thumbnails, on disk for faster browsing than the large images, which are stored on a slow access tape jukebox.)

However, Ogle does not explicitly disclose limiting access to image files.

Yokomizo, though, discloses limiting access to image files. (See Yokomizo column 10 lines 5-15, discussing the use of access codes for performing certain actions, including viewing images and enabling security.)

It would have been obvious to one of ordinary skill in the art at the time of the invention to apply the teachings of Yokomizo for the benefit of Ogle, because to do so allowed a system designer to implement a network-based image processing system, as taught by Yokomizo in column 4 lines 61-67. These references were all applicable to the same field of endeavor, i.e., multi-resolution images.

**Regarding claim 2:** Ogle teaches the acquisition and storage of full resolution and lower resolution image files. (See Ogle page 43, noting the section entitled "Storage", which discusses receiving images of varying resolutions from thumbnail to the highest resolution, it having been implicit that a thumbnail is created/copied from the highest resolution image.)

**Regarding claim 3:** Ogle teaches logical sets of images. (See Ogle page 43 section entitled "Schema", describing the use of attributes to group images.)

**Regarding claims 4-5:** Ogle teaches use of thumbnails and other images. (See Ogle page 43 section entitled "Storage", which discusses receiving images of varying resolutions from thumbnail to the highest resolution.)

**Regarding claim 6:** Ogle teaches the use of a thumbnail image to identify a desired higher resolution image. (See Ogle page 43, noting the section entitled "Storage", which discusses remote browsing it identify a desired, larger, image.)

**Claim 8** is directed to a computer-readable medium for storing the instructions to implement the method of claim 1. This claim is therefore substantially similar to claim 1, and therefore likewise rejected.

**Regarding independent claim 9:** Ogle discloses acquiring multi-resolution images and storing those images on media of differing access speeds, depending upon image size. (See Ogle page 43, noting the section entitled "Storage", which discusses receiving images of varying resolutions, and storing lower resolution images, such as thumbnails, on disk for faster browsing than the large images, which are stored on a slow access tape jukebox.)

However, Ogle does not explicitly disclose limiting access to image files and the use of a network. Yokomizo, though, discloses limiting access to image files. (See

Yokomizo column 10 lines 5-15, discussing the use of access codes for performing certain actions, including viewing images and enabling security.) Yokomizo further discloses the use of the Internet. (See Yokomizo column 2 lines 10-15, discussing the providing of image access via the World Wide Web.)

It would have been obvious to one of ordinary skill in the art at the time of the invention to apply the teachings of Yokomizo for the benefit of Ogle, because to do so allowed a system designer to implement a network-based image processing system, as taught by Yokomizo in column 4 lines 61-67. These references were all applicable to the same field of endeavor, i.e., multi-resolution images.

**Regarding claim 10:** Ogle teaches the distribution, storage and retrieval means for digital images. (See Ogle page 43, noting the section entitled "Storage", which discusses receiving storage and distribution of images of varying resolutions.) However, Ogle does not explicitly teach the rest of these instructions. Yokomizo, though, discloses the use of a film scanner, web server and the Internet. (See Yokomizo Figure 5 "Scanner" in box #1, web server #9 and home page #30 in the context of column 2 lines 10-15, discussing the providing of image access via the World Wide Web.)

**Regarding independent claim 12:** Ogle discloses acquisition, consolidation, routing, retrieval and rendering of multi-resolution images and storing of images on media of differing access speeds, depending upon image size. (See Ogle page 43, noting the section entitled "Storage", which discusses receiving images of varying resolutions, and storing lower resolution images, such as thumbnails, on disk for faster browsing than the large images, which are stored on a slow access tape jukebox.) Ogle further teaches logical sets of images. (See Ogle page 43 section entitled "Schema", describing the use of attributes to group images.)

However, Ogle does not explicitly disclose limiting access to image files and the use of a network. Yokomizo, though, discloses limiting access to image files. (See Yokomizo column 10 lines 5-15, discussing the use of access codes for performing certain actions, including viewing images and enabling security.) Yokomizo further discloses the use of the Internet. (See Yokomizo column 2 lines 10-15, discussing the providing of image access via the World Wide Web.)

It would have been obvious to one of ordinary skill in the art at the time of the invention to apply the teachings of Yokomizo for the benefit of Ogle, because to do so allowed a system designer to implement a network-based image processing system, as taught by Yokomizo in column 4 lines 61-67. These references were all applicable to the same field of endeavor, i.e., multi-resolution images.

**Claim 13** is substantially similar to claim 4, and therefore likewise rejected.

**Regarding claim 14:** Ogle does not explicitly disclose the use of web servers, managing digital image receipt and ordering, and the use of the Internet. Yokomizo, though, discloses the use of a film scanner, web server and the Internet. (See Yokomizo Figure 5 "Scanner" in box #1, web server #9 and home page #30 in the context of column 2 lines 10-15, discussing the providing of image access via the World Wide Web.) Yokomizo further discusses order placement. (See Yokomizo column 16 lines 32-34, discussing the use of a web server for the placement of orders via the Internet.)

**Regarding independent claim 16:** Ogle discloses a data structure and the acquisition, consolidation, routing, retrieval and rendering of multi-resolution images and storing of images on media of differing access speeds, depending upon image size. (See Ogle pages 42-43, noting the "Postgres" section at the bottom of page 42 and the Table 1 data structure at the top of page 43. Also see Ogle page 43, noting the section entitled "Storage", which discusses receiving images of varying resolutions, and storing lower resolution images, such as thumbnails, on disk for faster browsing than the large images, which are stored on a slow access tape jukebox.) Ogle further teaches logical sets of images. (See Ogle page 43 section entitled "Schema", describing the use of attributes to group images.)

However, Ogle does not explicitly disclose limiting access to image files and the use of a network. Yokomizo, though, discloses limiting access to image files. (See Yokomizo column 10 lines 5-15, discussing the use of access codes for performing

certain actions, including viewing images and enabling security.) Yokomizo further discloses the use of a network. (See Yokomizo column 2 lines 10-15, discussing the providing of image access via the World Wide Web, and Figure 8 #81 showing a web server and #80, showing an Internet connection, it having been well-known to those skilled in the art at the time of the invention that Internet file transfers were router-based.)

It would have been obvious to one of ordinary skill in the art at the time of the invention to apply the teachings of Yokomizo for the benefit of Ogle, because to do so allowed a system designer to implement a network-based image processing system, as taught by Yokomizo in column 4 lines 61-67. These references were all applicable to the same field of endeavor, i.e., multi-resolution images.

**Regarding claim 17:** Ogle teaches the acquisition and storage of full resolution and lower resolution image files. (See Ogle page 43, noting the section entitled "Storage", which discusses receiving images of varying resolutions from thumbnail to the highest resolution, it having been implicit that a thumbnail is created/copied from the highest resolution image.) Ogle further teaches a data structure for these images. (See Ogle pages 42-43, noting the "Postgres" section at the bottom of page 42 and the Table 1 data structure at the top of page 43.)

**Regarding claim 18:** Ogle discloses the use of a magnetic disk drive for fast storage. (See Ogle page 43, noting the section entitled "Storage", which discusses fast storage on magnetic disks in the first paragraph of that section.)

**Claims 19-20** are substantially similar to claims 17-18, respectively, and therefore likewise rejected.

**Regarding claims 21-22 and 24-25:** Ogle discloses the storage of multi-resolution images. (See Ogle page 43, noting the section entitled "Storage", which discusses receiving images of varying resolutions from thumbnail to the highest resolution, and provides exemplary threshold values for thumbnails and full resolution images.)

**Regarding claim 23:** Ogle does not explicitly disclose the use of preview images other than thumbnails. Yokomizo, though, discloses the use of preview images. (See Yokomizo column 18 lines 12-24, discussing various viewer options and file formats.)

**Regarding claim 26:** Ogle does not explicitly disclose the use of a WAN. Yokomizo, though, discloses the use of the World Wide Web. (See Yokomizo column 2



lines 10-15, discussing the providing of image access via the World Wide Web, and Figure 8 #81 showing a web server and #80, showing an Internet connection.)

**Regarding claim 29:** Ogle does not explicitly disclose the use of a scanner. Yokomizo, though, discloses the use of scanners. (See Yokomizo Figure 5 box 1 "Scanner", and Figure 9 #9-17.)

10. **Claims 7, 11, 15 and 27-28 are rejected under 35 U.S.C. 103(a)** as being unpatentable over Virginia E. Ogle et al. ("Chabot: Retrieval From a Relational Database of Images", IEEE Computer, Vol. 28, No. 9, Sep. 1995, pp. 40-48, hereafter referred to as "Ogle") in view of Yokomizo et al. (US Patent No. 6,522,418, filed May 12, 1998 and issued Feb. 18, 2003, hereafter referred to as "Yokomizo") and Lamaire et al. (US Patent No. 6,378,053, priority-filed as a divisional application Feb. 13, 1998 and issued Apr. 23, 2002, hereafter referred to as "Lamaire").

**Regarding claim 7:** Ogle does not explicitly disclose this limitation. Lamaire, though, discloses discarding infrequently used files and re-creating those files when later requested. (See Lamaire Abstract, discussing the employment of a least recently used replacement policy, it being noted that discarding and replacement of a low resolution file rather than a high resolution file, as taught by Lamaire, was an obvious

variant to one skilled in the art at the time of the invention, as there were only two choices available [i.e., discard/re-create the high or the low resolution file]. Since these were the only two choices, they were obvious in light of each other.)

It would have been obvious to one of ordinary skill in the art at the time of the invention to apply the teachings of Lamaire for the benefit of Ogle in view of Yokomizo, because to do so allowed a system designer to implement a platform- and language-independent content delivery system and method, as taught by Lamaire in the Abstract. These references were all applicable to the same field of endeavor, i.e., multi-resolution images.

**Claims 11, 15 and 27** are substantially similar to claim 7, and therefore likewise rejected.

**Regarding claim 28:** Ogle does not explicitly disclose this limitation. Lamaire, though, discloses regenerating deleted image files when later requested. (See Lamaire Abstract, discussing the obtaining of a deleted full resolution image version upon user or application request, it being noted that replacement of a low resolution file rather than a high resolution file, as taught by Lamaire, was an obvious variant to one skilled in the art at the time of the invention, as there were only two choices available [i.e., re-create/replace the high or the low resolution file]. Since these were the only two choices, they were obvious in light of each other.)

### **Conclusion**

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

### **Non-patent Literature**

Wagner, Matthias, et al., "Efficient and Flexible Web Access to Art-Historical Image Collections", SAC '00, Como, Italy, Mar. 19-21, 2000, pp. 915-921.

Andresen, Daniel, et al., "Scalability Issues for High Performance Digital Libraries on the World Wide Web", Proceedings of the ADL '96, IEEE 0-8186-7402-4, © 1996, pp. 139-148.

Browne, Shirley, et al., "Technologies for Repository Interoperatin and Access Control", Digital Libraries '98, Pittsburgh, PA, May 1998, pp. 40-48.

Cohen, Harvey A., "Access and Retrieval From Image Databases Using Thumbnails", International Symposium on Signal Processing and Its Applications, Gold Coast, Australia, Aug.25-30, 1996, pp. 427-428.

Talagala, Nisha, et al., "The Art of Massive Storage: A Web Image Archive", IEEE Computer, Nov. 2000, pp. 22-28.

### **US Patents**

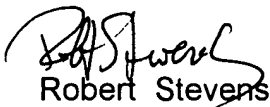
|                |           |
|----------------|-----------|
| Koyama et al   | 6,112,010 |
| Dellert et al  | 6,154,755 |
| Ohsawa et al   | 6,509,900 |
| McIntyre et al | 6,950,800 |
| Sitka          | 6,330,572 |
| Huether        | 6,850,911 |
| Morris et al   | 5,058,185 |

**Contact Information**


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert Stevens whose telephone number is (571) 272-4102. The examiner can normally be reached on M-F 6:00 - 2:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E. Breene can be reached on (571) 272-4107. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
Robert Stevens  
Examiner  
Art Unit 2162

September 8, 2006

  
SHAHID ALAM  
PRIMARY EXAMINER